(12) UK Patent Application (19) GB (11) 2 348 805 (13) A

(43) Date of A Publication 18.10.2000

(21) Application No 9908494.9

(22) Date of Filing 15.04.1999

(71) Applicant(s)
Gerard Francis Robinson
24 Upper Churchtown Road, Churchtown, Dublin 14, Ireland

(72) Inventor(s)
Gerard Francis Robinson

(74) Agent and/or Address for Service
Maclachlan & Donaldson
C/o John Orchard & Co, Staple Inn Bldgs North, High Holborn, London WC1V 7PZ, United Kingdom

(51) INT CL[7]
A47K 3/04 , F16J 15/02 15/10

(52) UK CL (Edition R)
A4N N14C N2D1

(56) Documents Cited
GB 2320068 A GB 2304281 A GB 2289924 A
US 4204376 A

(58) Field of Search
UK CL (Edition R) A4N N14C , F2B B1B B1G
INT CL[7] A47K 3/04 , F16J 15/02 15/10

(54) Abstract Title
Sealing strip

(57) A sealing strip (10) is adapted to be combined with a minimum volume of complementary sealing material (30) required to maintain a sealed joint between relatively vertical and horizontal surfaces. The strip (10) comprises a rigid first upper limb (11) having inner and outer faces (14, 15), a second outer limb (19) adapted to engage the sealing material (30) with a horizontal surface and a third limb (25) which forms a shuttering to reduce the volume of sealing material (30). The first upper limb (11) is adapted to be fixed to a vertical surface by ribs and recesses to form sealant reservoirs between the vertical surface and the outer face (15) of the limb (11).

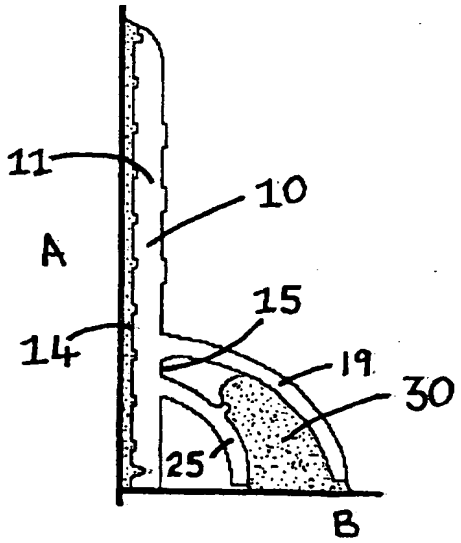

FIG.2

GB 2 348 805 A

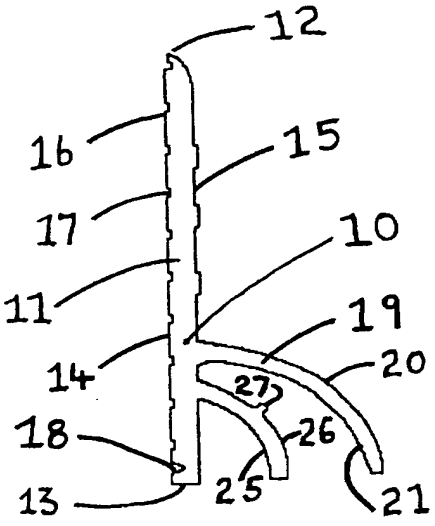

FIG.1

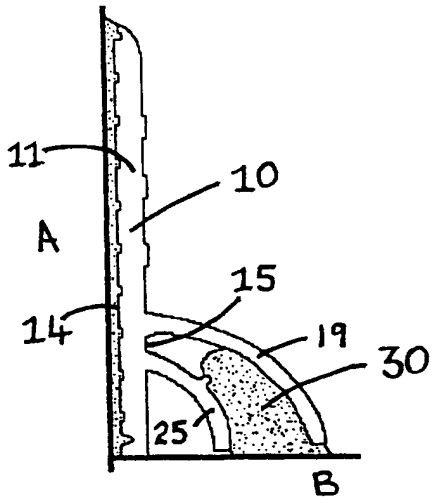

FIG.2

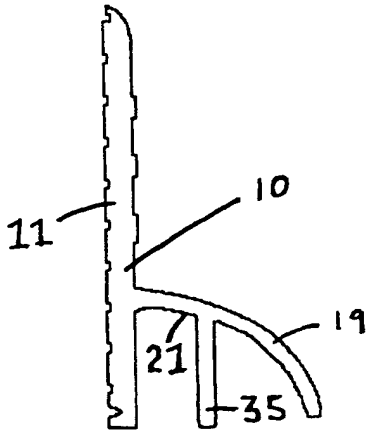

FIG.3

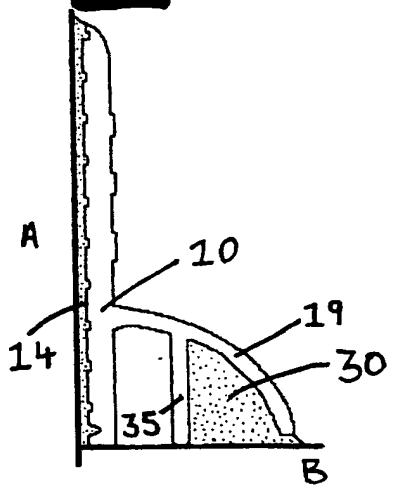

FIG.4

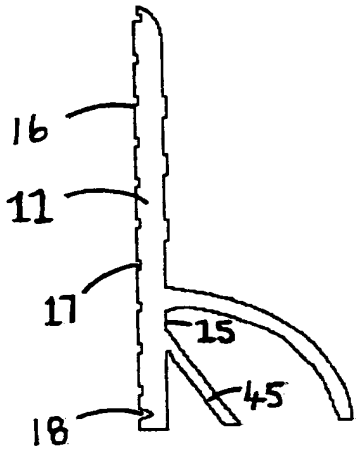

FIG.5

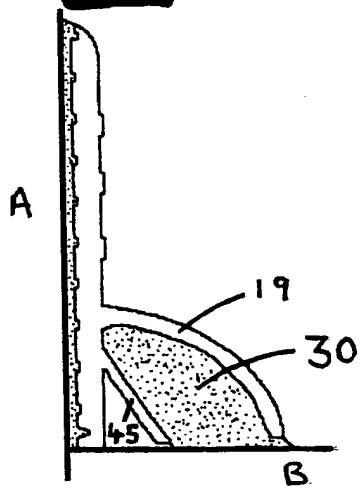

FIG.6

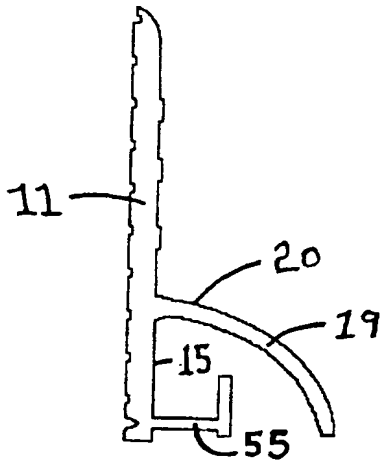

FIG 7

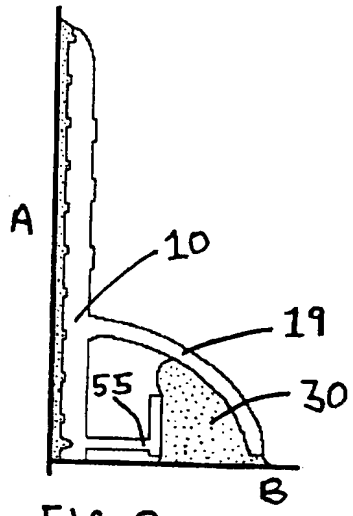

FIG. 8

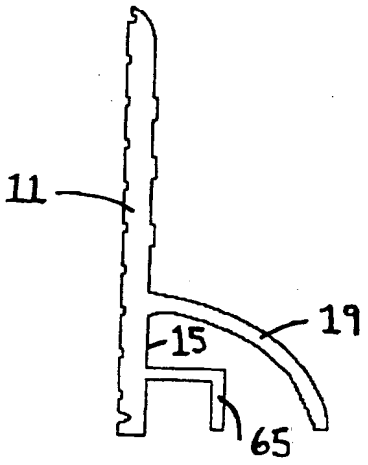

FIG. 9

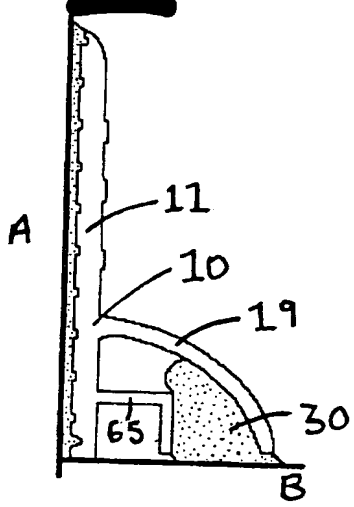

FIG. 10

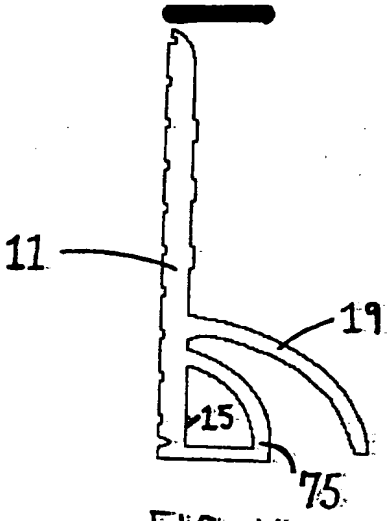

FIG. 11

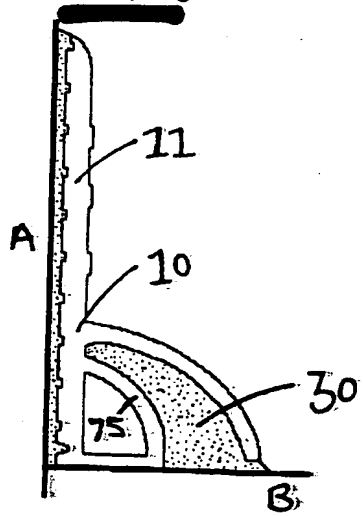

FIG. 12

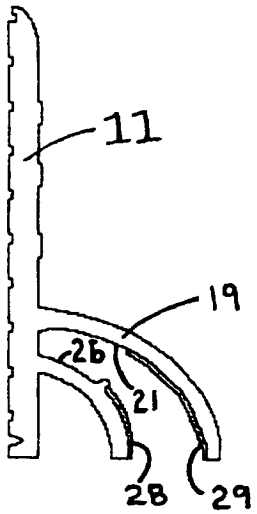

FIG. 13

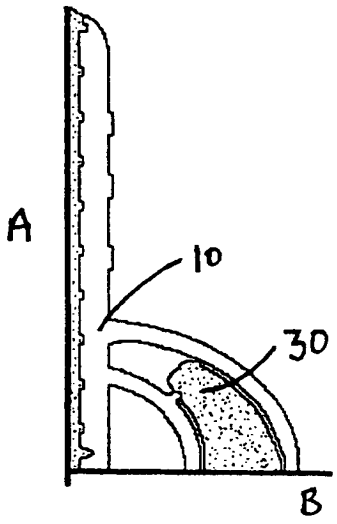

FIG 14

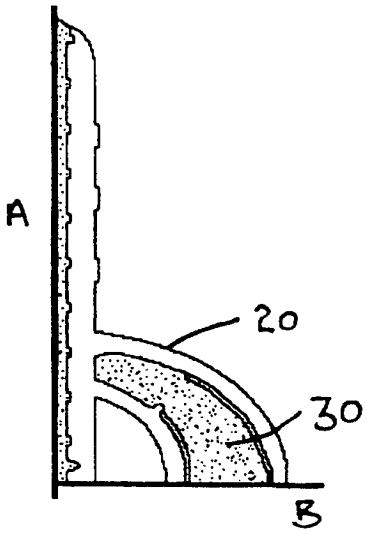

FIG. 15

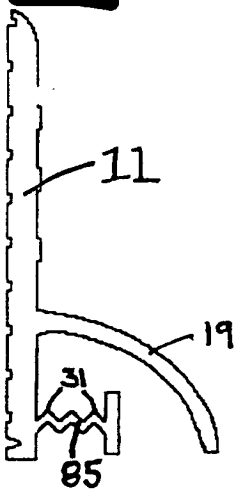

FIG. 16

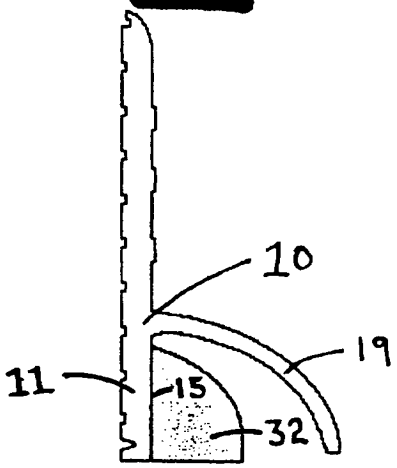

FIG. 17

STRIP PROFILE

The present invention relates to a strip profile for use when sealing the joint between two contiguous surfaces disposed at an angle to each other, such as, but not limited to the horizontal joint between a tiled wall and a shower tray or bath.

The main prior art method of strip profiles for use when sealing the junction of walls and horizontal surfaces (such as shower trays, baths and worktops) is as follows.

METHOD : Semi-rigid (typically uPVC) generally L-shaped, quadrant or scotia type profiles are adapted to accommodate sealing materials, and may be surface mounted or recessed into the wall surface over the joint.

The main disadvantages of the above arrangements are that strips employed to seal wide joints often require a substantial amount of complementary sealing materials.

It is the object of this invention to provide a strip profile that is adapted to be combined with, and minimise, the use and volume of complementary sealing material required to seal the joint, substantially reducing the aforementioned problems.

According to the present invention there is a longitudinal strip profile adapted to be combined with, and minimise, the use and volume of the complementary sealing material required to maintain a sealed joint between relatively vertical and horizontal surfaces, wherein the strip profile comprising of a substantially rigid first upper limb having an upper and lower boundary between which there extends an inner and outer face, and from which said first limb inner face and/or boundaries there extends at least one second outer limb, having an upper and lower face, the said second limb lower face of which is adapted to engage a sealing material with a relatively horizontal surface, whereby there extends from the first limb inner face or lower boundary and/or the said second limb lower face, a third limb and/or filler material, adapted and profiled to form a shuttering to reduce the volume of a complementary sealing material the first and/or second and/or third limbs may engage with a relatively horizontal surface.

Preferably, the first upper limb outer face is adapted to be fixed and/or sealed to a relatively vertical surface through the provision of ribs and/or recesses to form sealant reservoirs between the vertical surface and adjacent first limb outer face.

Advantageously, the second outer limb upper face is adapted to throw off water over the complementary sealing material.

In one embodiment the third limb is adapted to indicate the amount of complementary sealing material required by way of a ridge or mark running longitudinally upon it's surface.

In a second embodiment the third limb is adapted to indicate/contain the amount of complementary sealing material employed by way of restricting the passage of sealing material into the strip profile.

In a third embodiment the height of the first limb may be reduced through the provision of a tear away recessed score line along the lower boundary line.

Optionally, the first and/or second and/or third limbs or filler material may be wholly or partially layered with an anti-adherent material to provide a releasable engagement with a complementary sealing material.

The invention will hereinafter be more particularly described with reference to the accompanying drawings, which show by way of example only, embodiments of the seal according to the invention, in these drawings -:

Figure 1 represents a sectional view of the strip profile with the third limb extending curved from the inner face of the first upper limb.

Figure 2 details fig. 1 with complementary sealing and adhesive materials employed between the strip profile and a horizontal and vertical surface respectively.

Figure 3 represents a sectional view of the strip profile with the third limb extending generally downward from the lower face of the second outer limb.

Figure 4 details fig. 3 with complementary sealing and adhesive materials employed between the strip profile and a horizontal and vertical surface respectively.

Figure 5 represents a sectional view of the strip profile with the third limb extending generally diagonally downward from the inner face of the first upper limb.

Figure 6 details fig. 5 with complementary sealing and adhesive materials employed between the strip profile and a horizontal and vertical surface respectively.

Figure 7 represents a sectional view of the strip profile with the third limb extending generally outward and upward from the inner face of the first upper limb.

Figure 8 details fig. 7 with complementary sealing and adhesive materials employed between the strip profile and a horizontal and vertical surface respectively.

Figure 9 represents a sectional view of the strip profile with the third limb extending generally outward and downward from the inner face of the first upper limb.

Figure 10 details fig. 9 with complementary sealing and adhesive materials employed between the strip profile and a horizontal and vertical surface respectively.

Figure 11 represents a sectional view of the strip profile with the third limb connected at two points to the inner face of the first upper limb.

Figure 12 details fig. 11 with complementary sealing and adhesive materials employed between the strip profile and a horizontal and vertical surface respectively.

Figure 13 details fig. 1 wherein the second and third limbs are partially layered with an anti-adherent material.

Figure 14 details fig. 13 with complementary sealing and adhesive materials employed between the strip profile and a horizontal and vertical surface respectively. The amount of complementary sealing material required is measured by the gauge line on the third limb. This cross-section typifies the amount of complementary sealing material required on a straight run.

Figure 15 details fig. 14 wherein the amount of complementary sealing material required is not measured by the gauge line on the third limb. This cross-section typifies the amount of complementary sealing material required at the joint of two meeting strip profiles wherein the meeting ends are filled with the complementary sealing material.

Figure 16 represents a sectional view of the strip profile with a flexible third limb extending firstly generally outward from the inner face of the first upper limb and branching upward and downward thereafter.

Figure 17 represents a sectional view of the strip profile with a filler material extending generally outward from the inner face of the first upper limb.

Figure 1 details a section of the strip profile 10 with a first upper limb 11 having an upper boundary 12 and a lower boundary 13 between where there extends an outer face 14 adapted to be sealed/fixed to a generally vertical surface through a series of ridges 16 and recesses 17 which act as reservoirs to accommodate a sealing/adhesive material against the adjacent surface A (fig. 2)

The height of the first upper limb 11 may be reduced through the provision of a score line 18 extending along the lower boundary allowing a strip to be easily torn away.

The first upper limb 11 has an inner face 15 from which there extends a second outer limb 19 with an upper face 20 adapted to throw off water and a lower face 21 adapted to retain a complementary sealing material against a generally horizontal surface B (fig. 2)

Extending from the lower inner face of the first limb 11 is a third limb 25, the general curved downward profile and upper face 26 of which is adapted to confine the complementary sealing material 30 (fig. 2) to a desired volume.

A gauge line 27 by way of a ridge or marker extends longitudinally along the upper face 26 of the third limb 25 to indicate the required measure of a complementary sealing material used with the strip profile.

The height, width and profile of limb 25 may be adapted to limit or restrict the volume of complementary sealing material employed with the strip profile.

Figure 2 details a section of the strip profile 10 wherein the outer face 14 of the first limb 11 is sealed onto a vertical surface A, and the remaining second and third limbs 19 and 25 respectively retain a sealing material 30 between the horizontal surface B and the inner face 15 of the first limb 11.

Figures 3 and 4 detail substantially the same details as fig. 1 and 2 respectively with the exception of the third limb 35 which in this embodiment extends generally downward from the lower face 21 of the second limb 19. The third limb 35 in this embodiment is partially removed at the joint of two meeting strip profiles 10. In this embodiment the volume of complementary sealing material required is restricted by limbs 19 and 35.

Figures 5 and 6 detail substantially the same details as fig. 3 and 4 respectively with the exception of the third limb 45 which in this embodiment extends generally diagonally downward from the inner face 15 of the first limb 11. In this embodiment the volume of complementary sealing material required is again restricted by limbs 19 and 45.

Figures 7 and 8 detail substantially the same details as fig. 5 and 6 respectively with the exception of the third limb 55 which in this embodiment extends generally outward and upward from the inner face 15 of the first limb 11. In this embodiment the volume of complementary sealing material required is restricted by height and width of limb 55.

Figures 9 and 10 detail substantially the same details as fig. 7 and 8 respectively with the exception of the third limb 65 which in this embodiment extends generally outward and downward from the inner face 15 of the first limb 11. In this embodiment the volume of complementary sealing material required is restricted by height and width of limb 65.

Figures 11 and 12 detail substantially the same details as fig. 9 and 10 respectively with the exception of the third limb 75 which in this embodiment is connected at two points to the inner face 15 of the first limb 11. In this embodiment the volume of complementary sealing material required is restricted by height, width and profile of limb 75.

Figure 13 details substantially the same details as fig. 1 with the addition of anti-adherent materials 28 and 29 applied partially onto the upper face 26 of limb 25 and the lower face 21 of limb 19 respectively. The purpose of layering the surfaces 26 and 21 with an anti-adherent material is to form a release mechanism for the complementary sealing material in the event of differential joint movement between surfaces A and B.

Figures 14 and 15 detail substantially section fig 13 with the applied complementary sealing/adhesive materials. Fig 14 and 15 typifies sections of the strip profile and sealing/adhesive materials across a straight run and across a strip profile butt joint wherein the full cavity 30 is filled with the complementary sealing material.

Figures 16 detail substantially the same details as section fig. 7 with the exception of the third limb 85 which in this embodiment extends generally flexibly outward through a series of folds 31 allowing a degree of movement in the limb with the complementary sealing material under the effects differential joint movement.

Figure 17 details a section of a strip profile 10 with a filler material 32 attached to the inner face 15 of the first limb 11 which will reduce the amount of complementary sealing material required.

5

CLAIMS:

1. A longitudinal strip profile adapted to be combined with, and minimise, the use and volume of the complementary sealing material required to maintain a sealed joint between relatively vertical and horizontal surfaces, wherein the strip profile comprising of a substantially rigid first upper limb having an upper and lower boundary between which there extends an inner and outer face, and from which said first limb inner face and/or boundaries there extends at least one second outer limb, having an upper and lower face, the said second limb lower face of which is adapted to engage a sealing material with a relatively horizontal surface, whereby there extends from the first limb inner face or lower boundary and/or the said second limb lower face, a third limb and/or filler material, adapted and profiled to form a shuttering to reduce the volume of a complementary sealing material the first and/or second and/or third limbs may engage with a relatively horizontal surface.

2. A strip profile as claimed in claim 1 where the first upper limb outer face is adapted to be fixed and/or sealed to a relatively vertical surface through the provision of ribs and/or recesses to form sealant reservoirs between the vertical surface and adjacent first limb outer face.

3. A strip profile as claimed in any one of the preceding claims, wherein the second outer limb upper face is adapted to throw off water over the complementary sealing material.

4. A strip profile as claimed in any one of the preceding claims, wherein the third limb is adapted to indicate the amount of complementary sealing material required by way of a ridge or mark running longitudinally upon it's surface.

5. A strip profile as claimed in any one of the preceding claims, wherein the third limb is adapted to indicate/contain the amount of complementary sealing

material employed by way of restricting the passage of said sealing material into the strip profile.

6. A strip profile as claimed in any one of the preceding claims, wherein the height of the first limb may be reduced through the provision of a tear away recessed score line along the lower boundary line.

7. A strip profile as claimed in any one of the preceding claims, wherein the first and/or second and/or third limbs or filler material may be wholly or partially layered with an anti-adherent material to provide a releasable engagement with a complementary sealing material.

The Patent Office

INVESTOR IN PEOPLE

Application No:	GB 9908494.9	**Examiner:**	D. Haworth
Claims searched:	1-7	**Date of search:**	6 July 1999

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.Q): A4N (N14C); F2B (B1B, B1G)

Int Cl (Ed.6): A47K 3/04; F16J 15/02, 15/10

Other:

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
A	GB 2320068 A	(McComb)	
A	GB 2304281 A	(Webb)	
A	GB 2289924 A	(McComb)	
A	US 4204376 A	(Calvert)	

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.